This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-4. (Canceled)

5. (Original) A coating material including titanium based composite adapted for use on substrate components used at high temperature and/or in oxidative environments, wherein the composite includes a Ti(AI,O) base matrix, discrete ceramic particles and an oxide layer, wherein the discrete ceramic particles are integrally associated with the Ti(AI,O) base matrix and the oxide layer so that at a temperature of above about 600°C the composite is substantially resistant to oxidation and/or spallation.

6. (Original) The coating material according to claim 5 wherein the discrete ceramic particles range in size from about 0.1 pm to about 30 μm.

7. (Original) The coating material according to claim 5 wherein the discrete ceramic particles are selected from Al_2O_3, SiC, TiC, TiN, TiB_2, Y_2O_3 and/or Si_3N_4.

8. (Original) The coating material according to claim 5 wherein the ceramic particles constitute a volume fraction of about 10% to about 60% of the titanium based composite.

9. (Original) The coating material according to claim 5 wherein the composite is resistant to oxidation and/or spallation at temperatures between about 600°C and about 900°C and more preferably above 700°C.

10. (Withdrawn) A method of producing a coating for application to a component used at temperatures above about 600°C and/or in oxidative environments, wherein the method includes the steps of:
preparing a Ti(Al,O) based composite powder, with each of the powder particles including discrete Al_2O_3 particles, according to the mechanical milling and thermal treatment method disclosed in PCT/NZ98/00124;

applying the composite powder produced to a substrate component to produce a composite coating; and exposing the coated component to a high temperature, oxidative environment above about 600°C to form a surface oxide layer on the composite coating.

11. (Withdrawn) The method according to claim 10 wherein the composite powder is applied to the substrate using a thermal or plasma spray process.

12. (Withdrawn) The method according to claim 10 wherein the coated component
is heated to between about 700°C and about 900°C for between about 1 and about 200 hours in an oxygen containing environment to form the surface oxide layer.

13. (Withdrawn) The method according to claim 10 wherein the coated component is heated in an oven before use or is heated *in situ* during use.

14. (Withdrawn) A process for producing a titanium based composite material in a pre-selected form including the steps of:

preparing a Ti(Al,O) based composite powder with each of the powder particles, including discrete Al_2O_3 particles, according to the mechanical milling and thermal treatment method disclosed in PCT/NZ98/00124; pressing the powder formed into a pre-selected mould to

produce a powder compact and sintering the powder compact at a temperature of above about 700°C under an inert environment;
exposing the sintered composite material or component to a high temperature, oxidative environment above about 700°C to form a surface oxide layer;

wherein the product produced is substantially resistant to oxidation and/or spallation at temperatures above about 600°C.

15. (Withdrawn) The process according to claim 14 wherein the sintering temperature is between about 700°C and about 1650°C.

16. (Withdrawn) The process according to claim 14 wherein the inert environment is a vacuum or argon environment.

17. (Withdrawn) A method of producing a coating for application to a component used at temperatures above about 600°C and/or in oxidative environments, wherein the method includes the steps of:

preparing a Ti(Al,O) based composite powder, with each of the powder particles including discrete TiC, SiC, TiN, TiB_2, Y_20_3 and/or Si_3N_4 particles, according to the mechanical milling method disclosed in PCT/NZ98/00124; applying the composite powder produced to a substrate

component to produce a composite coating; and

exposing the coated component to a high temperature, oxidative environment above about 600°C to form a surface oxide layer on the composite coating.

18. (Withdrawn) The method according to claim 17 wherein the composite powder is applied to the substrate using a thermal or plasma spray process.

19. (Withdrawn) The method according to claim 17 wherein the coated component is heated to between about 700°C and about 900°C for between about 1 and 200 hours in an oxygen containing environment to form the surface oxide layer.

20. (Withdrawn) The method according to claim 17 wherein the coated component is heated in an oven before use or is heated *in situ* during use.

21. (Withdrawn) The method according to claim 17 wherein the component is to be used at temperatures between about 600°C and about 900°C.

22. (Withdrawn) A process for producing a titanium based composite material in a pre-selected form including the steps of:

preparing a Ti(Al,O) based composite powder, with each of the powder particles including discrete TiC, SiC, TiN, TiB_2, Y_20_3 and/or Si_3N_4 particles, according to the mechanical milling method disclosed in PCT/NZ98/001 24;

pressing the powder formed into a pre-selected mould to produce a powder compact and sintering the powder compact at a temperature of above about 700°C under an inert environment;

exposing the sintered composite material or component to 10 a high temperature, oxidative environment above about 700°C to form a surface oxide layer;

wherein the product produced is substantially resistant to oxidation and/or spallation at temperatures above 600°C, preferably between about 600°C and about 900°C.

23. (Withdrawn) The method according to claim 22 wherein the sintering temperature is between about 700°C and about 1650°C.

24. (Withdrawn) The method according to claim 22 wherein the inert environment is a vacuum or argon environment.

25. (Canceled)

26. (Original) A component including a coating produced according to the method of claim 10 or claim 17.